



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/527,980

03/15/2005

Adalbert Huber

MERCK-2981

1788

23599 7590 08/19/2008  
MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

HAILEY, PATRICIA L

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

08/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,980	<b>Applicant(s)</b> HUBER ET AL.	
	<b>Examiner</b> PATRICIA L. HAILEY	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Applicants' remarks and amendments, filed on May 13, 2008, have been carefully considered. Claim 10 has been canceled, and new claims 19-21 have been added.

Claims 1-7, 9, and 11-21 are now pending in this application.

#### *Election/Restrictions*

1. Claim 14 remains withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method for light protection or corrosion protection, there being no allowable generic or linking claim.

Claim 14 was withdrawn as a result of an election by original presentation in the Office Action mailed June 25, 2007.

#### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document or Documents was or were filed on March 15, 2005.

#### *Withdrawn Rejections*

The 112(1) rejection of claim 18 stated in the previous Office Action has been withdrawn in view of Applicants' persuasive arguments traversing this rejection.

The provisional nonstatutory obviousness-type double patenting rejection of claims 1-7, 9-13, 15, 16, and 18 as being unpatentable over claims 1-9 and 11-14 of copending U. S. Patent Application Publication No. 2007/0166534 (corresponding to Application Serial No. 10/582,495) stated in the previous Office Action, has been withdrawn in view of the Terminal Disclaimer filed by Applicants on May 13, 2008.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

*Claim Rejections - 35 USC § 103*

4. *Claims 1-3, 9, 11-13, and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glausch et al. (U. S. Patent No. 6,176,918) combined with Schauer et al. (U. S. Patent No. 6,686,046).*

Glausch et al. teach modified pearl luster pigments for waterborn coating systems, based on platelet-form substrates coated with metal oxides, wherein the coating system consists of a water-based oligomeric silane system. See the Abstract of Glausch et al., as well as col. 1, lines 60-67.

The silane system, which is considered to read upon the limitation “polysiloxane” in **claim 3** (and therefore the limitation “LCST polymer”), is described at col. 2, line 1, to col. 3, line 65 of Glausch et al., as well as col. 6, lines 44-67.

At col. 4, lines 27-40 of Glausch et al., reference is made to “novel pigments for pigmenting coating materials, printing inks, plastics and cosmetics..., for example inorganic and organic absorption pigments, metal-effect pigments and LCP pigments...The substrates used are pigments which consist of a platelet-form material, for example,...titanium dioxide, iron(III) oxide,...” (considered to read upon **claim 9**).

Glausch et al. do not teach or suggest the claim limitations regarding the remaining claimed “LCST and/or UCST polymer”.

Schauer et al. disclose particles provided with a coating of LCST polymers, prepared by dissolving an LCST polymer in a solvent at a temperature below the LCST, mixing the particles with the resulting solution, and raising the temperature of the resulting mixture to, and optionally beyond, the temperature at which the LCST polymer deposits onto the particle surfaces. See col. 1, lines 48-55 of Schauer et al. (considered to read upon **claim 19**), as well as col. 2, lines 21-55, which also discloses that the resultant LCST polymer coating applied to the particles exhibits thicknesses preferably greater than or equal to 50 nm (considered to read upon **claim 2**), and further discloses that the aforementioned coating process “is very preferably carried out such that subsequently to or during formation of the coating the LCST polymer is rendered immobile on the surface of the substrates to be coated therewith”, said immobilizing being rendered either by cross-linking the coating (col. 2, lines 55-60), or by thermodynamically immobilizing the polymer (col. 3, lines 24-32; considered to read upon **claims 16-18 and 21**).

Exemplary particles that can be coated include pigments. See col. 1, line 66 to col. 2, line 9 of Schauer et al., which also discloses titanium dioxide and iron oxide as specific examples of pigments.

Note that titanium dioxide and iron oxide are also disclosed in Glausch et al., as discussed above.

The pigments coated by the LCST polymers can be used to produce binder-free pigment pastes containing a carrier medium, preferably water or an organic solvent, which by reason of their freedom from binding agents can be used universally in paints and varnishes. See col. 4, lines 5-17 of Schauer et al. (considered to read upon **claims 12 and 13**).

Examples of the LCST polymers are the same as those recited in Applicants' **claim 3**. See col. 4, lines 31-40 of Schauer et al.

Schauer et al. at col. 4, lines 18-25 disclose the feasibility in incorporating functional components such as UV stabilizers, chromophores, or luminescent components into the LCST coating. This disclosure is considered to read upon **claim 11**.

Lastly, Schauer et al. at col. 4, lines 28-30 disclose that "coating with LCST polymers may also serve to modify the particle surface..."; this disclosure is considered to read upon the claim limitation "surface-modified".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Glausch et al. and Schauer et al., by either (1) substituting the pigments of Glausch et al. for the titanium dioxide and iron

oxide pigments disclosed in Schauer et al., or (2) substituting the coating systems of Glausch et al. with the polymers disclosed in Schauer et al., as the coating system of Glausch et al. and the polymers disclosed in Schauer et al. are viewed as functional equivalents in terms of coatings, and because both have been shown to coat pigments such as titanium dioxide and iron oxide.

Further, with respect to claim 1, as amended, and new claims 19-21, it is considered that the references of record continue to read upon these claims, despite their being in product-by-process form. It has been held that:

"Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the examiner to show that the same is a process of making." In re Brown, 173 U.S.P.Q. 685 and In re Fessmann, 180 U.S.P.Q. 324.

5. *Claims 1, 4-7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al. (U. S. Patent No. 5,563,242) in view Glausch et al. (U. S. Patent No. 6,176,918).*

Winter et al. disclose a polymer film composition comprising a base or color coat comprising a binder and an organic pigment or inorganic pigment or mixture thereof, and a clear coat adhering to the base coat. See col. 4 lines 46-51 of Winter et al.

The polymer film may also contain stabilized therein an organic material. Examples of these include polystyrene, poly-( $\alpha$ -methylstyrene), copolymers of styrene or methylstyrene, and polysiloxanes such as polyorganosiloxanes. See col. 6, line 48 to col. 7, line 2, and col. 8, lines 29-32 of Winter et al. (considered to read upon **claims 4 and 5**).

The stabilized polymer composition may also contain from about 0.01 to about 5% of conventional additives such as antioxidants, fillers such as carbon black, and plasticizers. See col. 9, lines 32-37 and col. 12, lines 54-62 of Winter et al. (considered to read upon **claims 6 and 7**).

Winter et al. do not explicitly recite the claimed "surface-modified effect pigments" as recited in claim 1.

Glausch et al. teach modified pearl luster pigments for waterborn coating systems, based on platelet-form substrates coated with metal oxides, wherein the coating system consists of a water-based oligomeric silane system. See the Abstract of Glausch et al., as well as col. 1, lines 60-67.

The silane system, which is considered to read upon the limitation "polysiloxane" in **claim 3** (and therefore the limitation "LCST polymer"), is described at col. 2, line 1, to col. 3, line 65 of Glausch et al., as well as col. 6, lines 44-67.

Note that Winter et al. as discussed above also teaches polysiloxanes.

At col. 4, lines 27-40 of Glausch et al., reference is made to "novel pigments for pigmenting coating materials, printing inks, plastics and cosmetics..., for example



inorganic and organic absorption pigments, metal-effect pigments and LCP pigments...”

Because these references disclose common components (polysiloxanes), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Winter et al. by incorporating therein the pigments disclosed in Glausch et al.

### *Response to Arguments*

Applicants' amendments to present the instant claims in product-by-process format are not seen to further distinguish the claims from the cited art of record.

In response to Applicants' arguments that there is little or no motivation to combine the references of record, the Examiner submits that motivation is found in the prior art's teachings regarding coating particles such as pigments with polymers corresponding to what Applicants claim as LCST and UCST polymers. Schauer et al. disclose titanium dioxide and iron oxide as exemplary pigments; Glausch et al. disclose pigments consisting of platelets upon which metal oxides – such as titanium dioxide and iron oxide – are deposited thereon.

Although it may appear that the references “teach completely different types of pigments and completely different types of coatings”, the references as discussed above are considered to continue to read upon Applicants' claims in their present form.

For these reasons, Applicants' arguments are not persuasive.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA L. HAILEY whose telephone number is (571)272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry A Lorengo/  
Supervisory Patent Examiner, Art Unit 1793

/PATRICIA L. HAILEY/  
Examiner, Art Unit 1793  
August 12, 2008